15A NCAC 02D .1703 EMISSION STANDARDS

(a) Any MSW landfill subject to this Section and having a design capacity greater than or equal to 2.5 million megagrams by mass and 2.5 million cubic meters by volume shall be required to collect and control MSW landfill emissions if the following conditions apply:

(1) The landfill has accepted waste at any time since November 8, 1987 or has additional design capacity available for future waste deposition.

(2) The landfill commenced construction, reconstruction, or modification on or before July 17, 2014.

(3) The landfill has an NMOC emission rate greater than or equal to 34 megagrams per year or Tier 4 surface emissions monitoring shows a surface emission concentration of 500 parts per million methane or greater.

(4) The landfill is in the closed landfill subcategory and has an NMOC emission rate greater than or equal to 50 megagrams per year or Tier 4 surface emissions monitoring shows a surface emission concentration of 500 parts per million methane or greater.

(b) Each owner or operator of a MSW landfill meeting the conditions of Paragraph (a) of this Rule shall install and start-up a collection and control system that captures the gas within the landfill within 30 months after:

(1) the first annual report in which the NMOC emission rate equals or exceeds 34 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 34 megagrams per year, as specified in 40 CFR 60.38f(d)(4);

(2) the first annual NMOC emission rate report for a landfill in the closed landfill subcategory in which the NMOC emission rate equals or exceeds 50 megagrams per year, unless Tier 2 or Tier 3 sampling demonstrates that the NMOC emission rate is less than 50 megagrams per year, as specified in 40 CFR 60.38f(d)(4); or

(3) the most recent NMOC emission rate report in which the NMOC emission rate equals or exceeds 34 megagrams per year based on Tier 2, if the Tier 4 surface emissions monitoring shows a surface methane emission concentration of 500 parts per million methane or greater as specified in 40 CFR 60.38f(d)(4)(iii).

(c) Each owner or operator of a MSW landfill meeting the conditions of Paragraph (a) of this Rule shall collect and control the gas from the landfill through the use of control devices where the following applies, except as provided in 40 CFR 60.24:

(1) a non-enclosed flare designed and operated in accordance with the parameters established in 40 CFR 60.18 except as noted in 40 CFR 60.37f(d);

(2) a control system designed and operated to reduce NMOC by 98 weight percent; or when an enclosed combustion device is used for control, to either reduce NMOC by 98 weight percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at three percent oxygen or less. The reduction efficiency or concentration in parts per million by volume shall be established by an initial performance test to be completed no later than 180 days after the initial startup of the approved control system using the test methods specified in 40 CFR 60.35f(d). The performance test is not required for boilers and process heaters with design heat input capacities equal to or greater than 44 megawatts that burn landfill gas for compliance with this Rule.

(A) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.

(B) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored shall be those specified in 40 CFR 60.37f.

(C) For the closed landfill subcategory, the initial or most recent performance test conducted by the facility to comply with 40 CFR Part 60, Subpart WWW; 40 CFR Part 62, Subpart GGG; or 40 CFR Part 60, Subpart Cc on or before July 17, 2014; shall be used for compliance with 40 CFR Part, Subpart Cf; or

(3) route the collected gas to a treatment system that processes the collected gas for subsequent sale or beneficial use such as fuel for combustion, production of vehicle fuel, production of high-Btu gas for pipeline injection, or use as a raw material in a chemical manufacturing process. Venting of treated landfill gas to the ambient air is not allowed. If the treated landfill gas cannot be routed for subsequent sale or beneficial use, then the treated landfill gas shall be controlled pursuant to either Subparagraph (c)(1) or (2) of this Rule. All emissions from any atmospheric vent from the gas treatment system are subject to the requirements of Paragraph (b) or (c) of this Rule. For purposes

of this Subparagraph, atmospheric vents located on the condensate storage tank are not part of the treatment system and are exempt from the requirements of Paragraph (b) or (c) of this Rule.

(d) Each owner or operator of a MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume shall submit to the Division a design capacity report as defined in 40 CFR 60.38f(a). Submittal of the initial design capacity report fulfills the requirements of this Rule, except as provided in Subparagraphs (d)(1) and (2) of this Rule, as follows:

(1) The owner or operator shall submit an amended design capacity report as provided in 40 CFR 60.38f(b). If the design capacity increase is the result of a modification, as defined in 15A NCAC 02D .1701, that was commenced after July 17, 2014, then the landfill becomes subject to 40 CFR Part 60 Subpart XXX instead of 40 CFR Part 60 Subpart Cf. If the design capacity increase is the result of a change in operating practices, density, or some other change that is not a modification as defined in 40 CFR 60.41f, then the landfill remains subject to Subpart Cf.

(2) When an increase in the maximum design capacity of a landfill with an initial design capacity less than 2.5 million megagrams or 2.5 million cubic meters results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator shall comply with Paragraph (e) of this Rule.

(e) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters shall either install a collection and control system as provided in Paragraphs (b) and (c) of this Rule or calculate an initial NMOC emission rate for the landfill using the procedures specified in 40 CFR 60.35f(a). The NMOC emission rate shall be recalculated annually, except as provided in 40 CFR 60.38f(c)(3), as follows:

(1) If the calculated NMOC emission rate is less than 34 megagrams per year, the owner or operator shall submit an annual NMOC emission rate report according to 40 CFR 60.38f(c), and recalculate the NMOC emission rate annually using the procedures specified in 40 CFR 60.35f(a) until such time as the calculated NMOC emission rate is equal to or greater than 34 megagrams per year, or the landfill is closed. This annual NMOC emission rate reporting requirement shall not apply to the facilities that elected to submit their reports as provided in 40 CFR 60.38f(c)(3):

(A) if the calculated NMOC emission rate is equal to or greater than 34 megagrams per year, the owner or operator shall either: comply with Paragraphs (b) and (c) of this Rule; calculate NMOC emissions using the next higher tier in 40 CFR 60.35f; or conduct a surface emission monitoring demonstration using the procedures specified in 40 CFR 60.35f(a)(6);

(B) if the landfill is permanently closed, a closure report shall be submitted to the Division as provided in 40 CFR 60.38f(f), except for exemption allowed pursuant to 40 CFR 60.31f(e)(4); and

(C) for the closed landfill subcategory, if the most recently calculated NMOC emission rate is equal to or greater than 50 megagrams per year, the owner or operator shall either: submit a gas collection and control system design plan as specified in 40 CFR 60.38f(d), except for exemptions allowed pursuant to 40 CFR 60.31f(e)(3), and install a collection and control system as provided in Paragraphs (b) and (c) of this Rule; calculate NMOC emissions using the next higher tier in 40 CFR 60.35f; or conduct a surface emission monitoring demonstration using the procedures specified in 40 CFR 60.35f(a)(6).

(2) If the calculated NMOC emission rate is equal to or greater than 34 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator shall either: submit a collection and control system design plan prepared by a professional engineer to the Division within one year as specified in 40 CFR 60.38f(d), except for exemptions allowed in 40 CFR 60.31f(e)(3); calculate NMOC emissions using a higher tier in 40 CFR 60.35f; or conduct a surface emission monitoring demonstration using the procedures specified in 40 CFR 60.35f(a)(6). Submitted design plans shall be reviewed by the Division pursuant to the procedures in 40 CFR 60.38f(d)(5) and (6).

(3) For the closed landfill subcategory, if the calculated NMOC emission rate is equal to or greater than 50 megagrams per year using Tier 1, 2, or 3 procedures, the owner or operator shall either: submit a collection and control system design plan as specified in 40 CFR 60.38f(d), except for exemptions allowed pursuant to 40 CFR 60.31f(e)(3); calculate NMOC emissions using a higher tier in 40 CFR 60.35f; or conduct a surface emission monitoring demonstration using the procedures specified in 40 CFR 60.35f(a)(6). Submitted design plans shall be reviewed by the Division pursuant to the procedures in 40 CFR 60.38f(d)(5) and (6).

(f) The collection and control system may be capped, removed, or decommissioned if the following criteria are met:

(1) The landfill is a closed landfill as defined in 40 CFR 60.41f. A closure report shall be submitted to the Division as provided in 15A NCAC 02D .1708(f).

(2) The collection and control system has been in operation a minimum of 15 years or the landfill owner or operator demonstrates that the GCCS will be unable to operate for 15 years due to declining gas flow.

(3) Following the procedures specified in 40 CFR 60.35f(b), the calculated NMOC emission rate at the landfill is less than 34 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

(4) For the closed landfill subcategory as defined in 40 CFR 60.41f, following the procedures specified in 40 CFR 60.35f(b), the calculated NMOC emission rate at the landfill is less than 50 megagrams per year on three successive test dates. The test dates shall be no less than 90 days apart, and no more than 180 days apart.

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